

**Amendments to the Claims:** This listing of claims will replace all prior versions, and listings, of claims in the application

Listing of Claims:

1-53. Canceled.

1           54. (New) An endoluminal prosthesis, comprising: a tubular wire support having  
2 a proximal end, a distal end and a central lumen extending therethrough; the wire support  
3 comprising at least a first and a second axially adjacent tubular segment, joined by a connector  
4 extending therebetween; wherein the first and second segments and the connector are formed  
5 from a single length of wire.

1           55. (New) An endoluminal prosthesis as in claim 54, comprising at least three  
2 segments and two connectors.

1           56. (New) An endoluminal prosthesis as in claim 54, comprising at least five  
2 segments and four connectors.

1           57. (New) An endoluminal prosthesis as in claim 54, wherein the wire in each  
2 segment comprises a series of proximal bends, a series of distal bends, creating a series of strut  
3 segments connecting the proximal bends and distal bends to form a tubular segment wall.

1           58. (New) An endoluminal prosthesis as in claim 57, wherein at least some of the  
2 strut segments are substantially linear.

1           59. (New) An endoluminal prosthesis as in claim 57, wherein each segment  
2 comprises from about 4 proximal bends to about 12 proximal bends.

1           60. (New) An endoluminal prosthesis as in claim 54, having at least a proximal  
2 segment, an intermediate segment and a distal segment, wherein the prosthesis is expandable  
3 from a reduced cross section to an expanded cross section.

1           61. (New) An endoluminal prosthesis as in claim 54, further comprising a  
2 polymeric layer on the wire support.

1           62. (New) An endoluminal prosthesis as in claim 61, wherein the layer comprises  
2 a tubular PTFE sleeve surrounding at least a central portion of the prosthesis.

1           63. (New) A multizone endoluminal prosthesis, comprising: a tubular wire  
2 support having a proximal end, a distal end, and a central lumen extending therethrough; the  
3 wire support comprising at least a first and a second axially adjacent tubular segments, joined  
4 by a connector extending therebetween; wherein the first tubular segment has a different radial  
5 strength than the second tubular segment.

1           64. (New) An endoluminal prosthesis as in claim 63, further comprising a third  
2 tubular segment, wherein at least one of the tubular segments has a different radial strength  
3 than the other two tubular segments.

1           65. (New) An endoluminal prosthesis as in claim 64, wherein a proximal end of  
2 the prosthesis is self expandable to a greater diameter than a central region of the prosthesis.

1           66. (New) An endoluminal prosthesis, comprising an elongate flexible wire,  
2 formed into a plurality of axially adjacent tubular segments spaced along an axis, each tubular  
3 segment comprising a zig zag section of the wire, having a plurality of proximal bends and  
4 distal bends, with the wire continuing between each adjacent tubular segment, wherein the  
5 prosthesis is radially compressible into a first, reduced cross sectional configuration for  
6 implantation into a body lumen, and self expandable to a second, enlarged cross sectional  
7 configuration at a treatment site in a body lumen.

1           67. (New) An endoluminal prosthesis as in claim 66, comprising at least three  
2 segments formed from said wire.

1           68. (New) An endoluminal prosthesis as in claim 67, further comprising an outer  
2 tubular sleeve surrounding at least a portion of the prosthesis.

1           69. (New) An endoluminal prosthesis as in claim 67, wherein the prosthesis has a  
2 proximal end and a distal end, and at least one of the proximal end and distal end as  
3 expandable to a larger diameter than a central section of the prosthesis in an unconstrained  
4 expansion.

1           70. (New) An endoluminal prosthesis as in claim 66, wherein at least one distal  
2 bend on a first segment is connected to at least one proximal bend from an adjacent segment.

1                   71. (New) An endoluminal prosthesis as in claim 70, wherein the connection  
2 comprises a pivotable connection.

1                   72. (New) An endoluminal prosthesis as in claim 71, wherein the connection  
2 comprises a metal link.

1                   73. (New) An endoluminal prosthesis as in claim 71, wherein the connection  
2 comprises a suture.

1                   74. (New) An endoluminal prosthesis as in claim 66, wherein the prosthesis has  
2 an expanded diameter of at least about 20 mm-30 mm in an unconstrained expansion, and the  
3 prosthesis is implantable using a catheter no greater than about 16 French.

1                   75. (New) A prosthesis as in claim 74, wherein the prosthesis has an expanded  
2 diameter of at least about 24 mm, and is implantable on a delivery device having a diameter of  
3 no more than about 16 French.

1                   76. (New) A method of implanting an endoluminal vascular prosthesis,  
2 comprising the steps of: providing a self expandable endoluminal vascular prosthesis, having a  
3 proximal end, a distal end and a central lumen extending therethrough, said prosthesis  
4 expandable from a first, reduced diameter to a second, enlarged diameter; mounting the  
5 prosthesis on a catheter, such that when the prosthesis is in the reduced diameter configuration  
6 on the catheter, the catheter diameter through the prosthesis is no more than about 16 French;  
7 introducing the catheter into a body lumen, and positioning the prosthesis at a treatment site in  
8 the body lumen; releasing the prosthesis at the treatment site, such that the prosthesis  
9 expands from the first diameter to the second diameter; wherein the second diameter is at least  
10 about 20 mm.

1                   77. (New) The endoluminal prosthesis as in claim 54 further comprising:  
2                   prosthesis segments configured for insertion into the vasculature of a body,  
3 wherein said prosthesis segments are configured for engagement with one another to form said  
4 endoluminal prosthesis in the vasculature;

5                   wherein a portion of at least one of said prosthesis segments has a different  
6 radiopacity, said portion of different radiopacity facilitating proper alignment of said prosthesis  
7 segments with respect to one another during said engagement of said prosthesis segments.

1           78. (New) The endoluminal prosthesis as in claim 54 further comprising:

2           prosthesis segments configured for engagement to one another to form said  
3           endoluminal prosthesis in a body lumen;

4           radiographic indicia defined on at least one of said prosthesis segments and  
5           having different radiopacity from said prosthesis segment, wherein the composite radiographic  
6           image of said radiographic indicia varies with the rotational orientation of said prosthesis  
7           segment in the body lumen;

8           wherein the rotational orientation of said prosthesis segment in the body lumen is  
9           indicated by said radiographic image for optional adjustment of the rotational orientation.

1           79. (New) A system for introducing the endoluminal prosthesis of claim 54 into a  
2           vessel to define a continuous lumen, said system comprising:

3           a first introducer for introducing a first prosthesis segment of said endoluminal  
4           prosthesis into the vessel, said first prosthesis segment having a portion adapted for connection  
5           to another prosthesis segment; and

6           a second introducer for (a) introducing a second prosthesis segment of said  
7           endoluminal prosthesis in a radially compressed state into the vessel and into said portion of  
8           said first prosthesis segment, and (b) deploying said second prosthesis segment to connect to  
9           said portion of said first prosthesis segment and to define said continuous lumen through said  
10          first prosthesis segment and said second prosthesis segment.

1           80. (New) The endoluminal prosthesis as in claim 54, said endoluminal prosthesis  
2           being configured for placement at an angiological bifurcation of a vessel into two branched  
3           vessels, said endoluminal prosthesis further comprising a first bifurcated graft member, at least  
4           partially supported by a bifurcated stent member, defining two lumens, at least one of which is  
5           configured to be disposed entirely within said vessel and is adapted to mate with a second stent  
6           configured to extend into one of the two branched vessels.

1           81. (New) The endoluminal prosthesis as in claim 54, said endoluminal prosthesis  
2           comprising proximal and distal prosthesis segments, a male engaging portion on a selected one  
3           of said proximal and distal prosthesis segments, and a female portion on another one of said  
4           proximal and distal prosthesis segments, said male engaging portion being configured to be

5 positioned at least partially within said female portion for inter-engagement between the outer  
6 surface of said male engaging portion and the inner surface of said female portion to resist  
7 longitudinal movement to prevent separation of said proximal and distal prosthesis segments in  
8 service, each of said male engaging portion and said female portion comprising a stent and at  
9 least one of said proximal and distal prosthesis segments comprising a graft layer attached to  
10 said stent, said graft layer being configured to be interposed between said male engaging  
11 portion and said female portion to form a substantially fluid-tight seal upon assembly.